

IN THE CLAIMS

The claims have not been amended herein, but are provided for the Examiner's convenience.

1-16. (Canceled)

17. (Previously Amended) A process comprising:

- forming a metallization;
- forming a refractory metal first layer over the metallization;
- forming a refractory metal second layer over the refractory metal first layer;
- forming a refractory metal third layer above and on the refractory metal second layer, wherein the refractory metal third layer is substantially the same metal as the refractory metal first layer;
- forming a refractory metal fourth layer above and on the refractory metal third layer, wherein the refractory metal fourth layer is substantially the same metal as the refractory metal second layer; and
- forming an electrically connective bump above the refractory metal fourth layer.

18. (Original) The process according to claim 17, wherein forming a metallization comprises:

- forming a copper metallization pad over a substrate, wherein the copper metallization pad makes contact with a metallization selected from a range of metal-one (M1) to M6.

19. (Original) The process according to claim 17, wherein forming a refractory metal first layer over the metallization comprises:

- depositing the refractory metal first layer by physical vapor deposition of a composition selected from Ni, Co, Pd, Pt, Ti, Zr, Hf, Cr, Mo, W, Sc, Y, La, and Ce.

20. (Withdrawn)

21. (Original) The process according to claim 17, wherein forming a refractory metal second layer over the refractory metal first layer comprises:

depositing the refractory metal second layer by physical vapor deposition of a composition selected from Ni, Co, Pd, Pt, NiV, CoV, PdV, PtV, Ti, Zr, Hf, Cr, Mo, W, Sc, Y, La, and Ce in a solid-solution or stoichiometric ratio.

22. (Withdrawn)

23. (Original) The process according to claim 17, wherein forming a refractory metal third layer over the metallization comprises: depositing the refractory metal third layer by physical vapor deposition.

24. (Withdrawn)

25. (Original) The process according to claim 17, wherein forming a refractory metal fourth layer over the refractory metal first layer comprises:

depositing the refractory metal fourth layer by physical vapor deposition.

26-45. (Withdrawn)